4 - ReactJS

## Learning Outcomes

On completion of this lab you will rebuild your notes application using ReactJS.

## Organisation

Please complete the exercises and questions individually. Some revision questions have been included on this worksheet, please answer these **briefly** and **in your own words**, as these have been allocated marks on this sheet

## Grading

This worksheet is worth up to 20% of your overall module grade.

You may work on this worksheet during labs 10, 11 and 12 with instructor assistance.

## Submission

The deadline for submission is Sunday Dec 18th 2022 @23:59 through Brightspace

* The work and submission workflow is as follows:
* Create a sub-folder for each problem below. problem-1, lecture-review.
* Put your solution for each problem in their respective folders.
* If you could create a mark down file for the lecture review questions (ie answers.md)
* When you are finished developing your worksheet solution, compress and zip all problems into one zip file. Name this ***<student-id>***-lab-4.zip
* ***<student-id>*** is something like C12345678
* Upload to Brightspace Lab 4 - Upload

## Resources

* <https://reactjs.org/>
* <https://reactjs.org/tutorial/tutorial.html>

## Questions

|  |  |  |
| --- | --- | --- |
| 0 | Convert your notes application from **lab 1** to use a react application | 50 Marks |
| 1 | Explain using code examples what is meant by props and state in React JS? | 10 Marks |
| 2 | In functional programming, what does the term functor mean? Can you give an example in JavaScript? | 10 Marks |
| 3 | We have looked at three kinds of asynchronous programming mechanisms, namely callbacks, promises and streams. Mention one advantage and one disadvantage of each type. | 10 Marks |
| 4 | With the aid of a diagram and example code, describe the Cascading Style Sheets (CSS) Box Model and show how it can be used to space DOM elements | 10  Marks |
| 5 | Detail how the browser loads and bootstraps a rich web application from an initial URL. | 10 Marks |

## 